What we claim is:

1. An isolated polypeptide comprising SEQ ID NO: 2.

2. An isolated polypeptide comprising an amino acid sequence that has at least 98% identity with the amino acid sequence of SEQ ID NO: 2.

3. An isolated polynucleotide selected from the group consisting of a polynucleotide encoding the polypeptide of claim 1, a polynucleotide comprising SEQ ID NO: 1, a polynucleotide comprising nucleotides 291-7074 of SEQ ID NO: 1, and a polynucleotide encoding the polypeptide of claim 2.

4. An isolated polynucleotide comprising a nucleotide sequence that is complementary to the polynucleotide of claim 3.

5. An isolated polynucleotide comprising a nucleotide sequence that has at least 90% identity with the polynucleotide comprising SEQ ID NO: 1.

6. An isolated polynucleotide comprising a nucleotide sequence that has at least 95% identity with the polynucleotide comprising SEQ ID NO: 1.

7. An isolated polynucleotide comprising a nucleotide sequence that is complementary to the polynucleotide of claim 5.

8. A composition comprising the polynucleotide of claim 3 and a suitable carrier.

9. A composition comprising the polynucleotide of claim 4 and a suitable carrier.

10. A composition comprising the polynucleotide of claim 5 and a suitable carrier.

11. A recombinant vector comprising the polynucleotide of claim 3.

12. A recombinant vector comprising the polynucleotide of claim 4.

13. A recombinant vector comprising the polynucleotide of claim 5.

14. The recombinant vector of claim 11, further comprising a heterologous promoter polynucleotide.

15. The recombinant vector of claim 12, further comprising a heterologous promoter polynucleotide.

16. The recombinant vector of claim 13, further comprising a heterologous promoter polynucleotide.

17. The recombinant vector of claim 14, wherein said heterologous promoter is a cytomegalovirus promoter.

18. The recombinant vector of claim 17, wherein said vector is pCEPhABC1.

19. A composition comprising the recombinant vector of claim 11.

20. A composition comprising the recombinant vector of claim 13.

21. A composition comprising the recombinant vector of claim 14.

22. A host cell comprising the recombinant vector of claim 11.

23. A host cell comprising the recombinant vector of claim 13.

24. A host cell comprising the recombinant vector of claim 14.

25. An isolated polypeptide comprising SEQ ID NO: 8.

26. An isolated polynucleotide encoding the polypeptide of claim 25.

27. An isolated polynucleotide comprising SEQ ID NO: 7.

28. An isolated polypeptide comprising SEQ ID NO: 10.

29. An isolated polynucleotide encoding the polypeptide of claim 28.

30. An isolated polynucleotide comprising SEQ ID NO: 9.

31. A recombinant vector comprising the polynucleotide of claim 27.

32. A recombinant vector comprising the polynucleotide of claim 30.

33. A method for producing an ABC1 protein in a mammalian host cell comprising the steps of:

(a) transfecting the mammalian host cell with a recombinant expression vector comprising a polynucleotide encoding ABC1 in an amount sufficient to produce a detectable level of ABC1 protein; and

(b) purifying the produced ABC1 protein.

34. The method of claim 33, wherein the recombinant expression vector comprises the polynucleotide of claim 3.

35. A method for expressing ABC1 in the cells of a mammalian subject comprising the step of administering to a mammalian subject a recombinant expression vector comprising a polynucleotide encoding ABC1 in an amount sufficient to express ABC1 in the cells of a mammalian subject.

36. The method of claim 35, wherein the recombinant expression vector comprises the polynucleotide of claim 3.

37. A method suitable for increasing cholesterol efflux from cells of a mammalian subject comprising administering to the mammalian subject a recombinant expression vector comprising a polynucleotide encoding ABC1 in an amount sufficient to increase cholesterol efflux from said cells.

38. The method of claim 37, wherein the recombinant expression vector comprises the polynucleotide of claim 3.

39. The method of claim 37, wherein the recombinant expression vector is a viral delivery vector.

40. The method of claim 39, wherein the viral delivery vector is an adenoviral vector.

41. The method of claim 39, wherein the viral vector is a lentiviral vector.

42. The method of claim 37, wherein the recombinant expression vector is a non-viral delivery vector.

43. A method suitable for increasing cholesterol efflux from cells of a mammalian subject comprising administering to the mammalian subject via a non-viral delivery system a polynucleotide encoding ABC1 in an amount sufficient to increase cholesterol efflux from said cells.

44. The method of claim 43, wherein the polynucleotide encoding ABC1 comprises the polynucleotide of claim 3.

45. The method of claim 43, wherein the non-viral delivery system is selected from the group consisting of DNA-ligand complexes, adenovirus-ligand-DNA complexes, adeno-associated virus-ligand-DNA complexes, direct injection of DNA, $CaPO_4$ precipitation, gene gun techniques, electroporation, liposomes, and lipofection.

46. A method suitable for increasing cholesterol efflux from cells of a mammalian subject comprising the step of administering to the mammalian subject a therapeutic amount of a compound that increases the expression of ABC1 in said cells.

47. The method of claim 46, wherein said compound is a cAMP analogue.

48. The method of claim 47, wherein said compound is selected from the group consisting of 8-bromo cAMP, N6-benzoyl cAMP, and 8-thiomethyl cAMP.

49. The method of claim 46, wherein said compound increases the synthesis of cAMP.

50. The method of claim 49, wherein said compound is forskolin.

51. The method of claim 46, wherein said compound is a phosphodiesterase inhibitor.

52. The method of claim 51, wherein said compound is selected from the group consisting of rolipram, theophylline, 3-isobutyl-1-methylxanthine, R020-1724, vinpocetine, zaprinast, dipyridamole, milrinone, amrinone, pimobendan, cilostamide, enoximone, peroximone, and vesnarinone.

53. A method suitable for increasing the gene expression of ABC1 in the cells of a mammalian subject comprising the step of administering to the mammalian subject a cAMP analogue in an amount sufficient to increase the expression of ABC1 in said cells.

54. A method suitable for increasing cholesterol efflux of the cells of a mammalian subject by administering to the mammalian subject a compound that increases ABC1 activity in an amount sufficient to increase cholesterol efflux.

55. A method for screening a test compound to determine whether the test compound promotes ABC1-mediated cholesterol efflux from cells in culture comprising the steps of:

assaying the level of cholesterol efflux in a sample of mammalian cells maintained in culture to determine a control level of cholesterol efflux;

contacting the cells with the test compound being screened;

assaying the level of cholesterol efflux in a sample of cells after contact with the test compound; and

assaying the level of ABC1-mediated cholesterol efflux in a sample of cells after contact with the test compound, thereby determining whether the test compound promotes ABC1-mediated cholesterol efflux from cells in culture.

56. The method of claim 55, wherein the cultured cells are derived from a cell line.

57. The method of claim 56, wherein the cell line is selected from the group consisting of fibroblast, macrophage, hepatic, and intestinal cell lines.

58. The method of claim 57, wherein the cell line is RAW 264.7.

59. The method of claim 55, wherein the level of ABC1-dependent cholesterol efflux is assayed using an anti-ABC1 antibody that inhibits the activity of ABC1 upon binding.

60. The method of claim 55, wherein the level of ABC1-dependent cholesterol efflux is assayed using an anti-sense ABC1 polynucleotide.

61. The method of claim 60, wherein the polynucleotide comprises SEQ ID NO: 57.

62. A method for detecting the comparative level of ABC1 expression in the cells of a mammalian subject comprising the steps of :

obtaining a cell sample from the mammalian subject;

assaying the level of ABC1 mRNA expression in the cell sample; and

comparing the level of ABC1 mRNA expression in the cell sample with a pre-determined standard level of ABC1 mRNA expression, thereby detecting the comparative level of ABC1 gene expression in the cells of a mammalian subject.

63. The method of claim 62, wherein detection of the comparative level of ABC1 expression in cells of a mammalian subject is used to determine a susceptibility to coronary heart disease of the mammalian subject.

64. The method of claim 62, wherein the level of ABC1 mRNA expression is assayed by reverse transcription polymerase chain reaction, northern blot, or RNAse protection assay.

65. A method for detecting the comparative level of ABC1 protein in the cells of a mammalian subject comprising the steps of :

obtaining a cell sample from the mammalian subject;

assaying the amount of ABC1 protein in the cell sample; and

comparing the amount of ABC1 protein in the cell sample with a pre-determined standard amount of ABC1 protein, thereby detecting the comparative level of ABC1 protein in the cells of the mammalian subject.

66. The method of claim 65, wherein detection of the comparative level of ABC1 protein in cells of a mammalian subject is used to determine a susceptibility to coronary heart disease of the mammalian subject.

67. The method of claim 65, wherein the assay to determine the amount of ABC1 protein comprises an immunoassay.

68. The method of claim 67, wherein the amount of ABC1 protein is determined by (a) contacting the cell sample with a population of anti-ABC1 antibodies and (b) detecting the specific binding ABC1 antibodies associated with the cell sample.

69. The method of claim 68, wherein the ABC1 antibodies are detected by western blotting, immunoprecipitation, or FACS.

70. An isolated antibody that binds specifically to the isolated polypeptide of claim 1 or claim 2.

71. The antibody of claim 70 wherein the antibody is a monoclonal antibody.

72. The antibody of claim 70 wherein the antibody is a polyclonal antibody.

73. The antibody of claim 70 wherein the antibody, upon binding to an ABC1 polypeptide, inhibits the cholesterol transport activity of the ABC1 polypeptide.

74. A kit suitable for screening a compound to determine whether the compound modulates ABC1-dependent cholesterol efflux comprising an inactivating anti-ABC1 antibody in an amount sufficient for at least one assay and instructions for use.

75. A kit suitable for screening a compound to determine whether the compound modulates ABC1-dependent cholesterol efflux comprising an antisense ABC1 oligonucleotide in an amount sufficient for at least one assay and instructions for use.

76. The kit of claim 75, wherein the antisense ABC1 oligonucleotide comprises SEQ ID NO: 53.